

LCQ13: Management of water resources

Following is a question by the Hon Claudia Mo and a written reply by the Secretary for Development, Mr Michael Wong, in the Legislative Council today (June 27):

Question:

On the management of water resources, will the Government inform this Council:

(1) of the latest progress of the works for the first stage of the desalination plant at Tseung Kwan O; whether it will adopt measures to facilitate the completion of the construction works for the plant ahead of the target date of 2022; of the progress of the works for the second stage and whether an implementation timetable is in place; if there is no timetable, of the reasons for that;

(2) of the latest progress of the following measures on new sources of water supply:

(i) supplying reclaimed water to the north-eastern part of the New Territories in phases for non-potable uses, and

(ii) wider use of grey water recycling and rainwater harvesting systems under suitable new government projects;

(3) whether it has studied exploring new water sources to diversify water resources, thereby reducing the reliance on Dongjiang water; if not, of the reasons for that; and

(4) regarding the consultancy review of the Total Water Management Strategy expected to be completed within this year, of (i) its preliminary findings and (ii) the outstanding work?

Reply:

President,

The Water Supplies Department (WSD) promulgated the Total Water Management Strategy in 2008 to ensure sustainable and reliable water supply in Hong Kong. The Strategy puts an emphasis on containing the growth of water demand through water conservation and exploiting new water resources. The WSD is currently exploiting three new water sources, namely desalinated seawater, reclaimed water and recycled grey water/harvested rainwater, to supplement the three existing water sources, being local yield, Dongjiang (DJ) water and seawater for flushing.

My response to the four parts of the Hon Claudia Mo's question is as follows:

Tenders are being invited for the "Design, Build and Operate" contract of the first stage of Tseung Kwan O desalination plant, which is anticipated for commissioning in 2022. The first stage of desalination plant will have a water production capacity of 135 000 cubic metres per day to meet about five per cent of fresh water demand in Hong Kong. We have made provision for its future expansion to the ultimate water production capacity of 270 000 cubic metres per day when necessary.

Under the contract of the first stage of desalination plant, the period for design and construction is 39 months, which has been compressed as far as possible. At this stage, we are endeavouring to complete the invitation and assessment of tenders as soon as possible, and seek support of the Public Works Subcommittee for obtaining funding approval from the Finance Committee of the Legislative Council with a view to commencing the contract of the first stage of desalination plant as soon as possible. During the period of design and construction, we will closely supervise the contractor in order to commission the first stage of desalination plant in 2022 as scheduled. The Government will study the programme for implementing the second stage of Tseung Kwan O desalination plant having regard to the supply situation of various water resources, water demand forecast, and development of desalination technology.

(2) We plan to supply reclaimed water for toilet flushing in the northeast New Territories in phases starting with Sheung Shui and Fanling. We are currently taking forward the implementation of the associated infrastructure works. Whilst the construction of a service reservoir of flushing water and laying of truck water mains commenced in April 2017, we plan to start laying the first stage of the local distribution mains in Sheung Shui and Fanling in the third quarter of this year. Furthermore, we are continuing with the design of the remaining works, including a chlorination plant for production of reclaimed water, a pumping system and the second stage of the local distribution mains in Sheung Shui and Fanling.

Besides, we plan to launch a public consultation on the supply of reclaimed water this year and commence the related legislative amendment work to dovetail the provision of reclaimed water for toilet flushing in Sheung Shui and Fanling from 2022.

We have also been advocating the adoption of grey water reuse system and/or rainwater harvesting system in suitable government works projects. A joint technical circular on Green Government Buildings has been issued by Development Bureau (DEVB) and Environment Bureau (ENB) (DEVB technical circular no. 2/2015 / ENB circular memorandum no. 3/2015). This circular requires the utilisation of grey water recycling and/or rainwater harvesting to reduce fresh water demand for non-potable uses as far as practicable. As for private buildings, we make use of the assessment tools in the Building Environmental Assessment Method Plus for Existing Buildings Version 2.0 issued by the Hong Kong Green Building Council to encourage the adoption of grey water reuse and/or rainwater harvesting systems by awarding bonus credits to private buildings with these systems. Apart from these measures, we will construct a centralised grey water recycling system in the Anderson

Road Quarry development site to treat grey water collected from end users within the development for flushing use.

(3) The WSD is currently exploiting three new water sources, namely desalinated seawater, reclaimed water and recycled grey water/harvested rainwater, to supplement the three existing water sources, i.e. local yield, DJ water and seawater for flushing. The water sources of Hong Kong will thus increase from three to six, becoming more diversified. In addition, we will continue to study the feasibility of exploiting other water resources, including their reliability, environmental impact, technological development, sustainability, cost effectiveness. We will also keep in view the development of new water resources in different parts of the world and their feasibility of application in Hong Kong.

(4) The consultants employed by the WSD are conducting a review on the Strategy. The review includes evaluating the effectiveness of the Strategy being implemented, forecasting long-term water demand and supply up to 2040, exploring new water management initiatives and assessing the need of adjusting current measures in the formulation of new water management strategy.

The consultants have reviewed the various water management initiatives. They are currently reviewing the long-term water demand of Hong Kong based on the latest available data and the corresponding water management initiatives. The review of the Strategy is expected to complete by the end of 2018.